REMARKS

In the office action dated 06 July 2005, claims 1-33 were pending and examined; claims 1-3, 5, 6, 8, 12-19, 21, 22, 24, and 28-33 were rejected; and claims 4, 7, 9-11, 20, 23, and 25-27 were objected to. In addition the examiner requested correction of Figures 1, 3b, and 3c and a replacement abstract. By way of this amendment, claims 1 and 17 and Figures 1, 3b, and 3c are amended and a replacement abstract is provided. These amendments present no new matter. Reconsideration of the objections and rejections and further examination is respectfully requested.

As mentioned above, a new abstract is submitted on a replacement page. An amended Figure 1 is submitted on a replacement sheet now designated as "prior art". Likewise, an amended Figure 3 is submitted on a replacement sheet now designated as "prior art".

Claims 1-3, 5, 6, 8, 12-19, 21, 22, 24, and 31-33 were rejected under 35 U.S.C 102(b) as being anticipated by Bahjat (US 3,864,667).

Applicants have amended independent claims 1 and 17 in order to more particularly and completely claim the present invention. No new matter has been introduced. The claim amendment clarifies the meaning of "a first and second dispersion curve in the frequency domain from the wavefield data".

The amendment removes the relevance of Bahjat for the present application. Bahjat describes a method of measuring phase velocity versus frequency. Bahjat further describes the use of a model to fit a model curve as closely as possible to the measured curve (FIG. 2). The fitted model is then used to derive parameters relating to the weathered layer.

Contrary to the Examiner's comments on Bahjat there is no "second" dispersion curve which is based on observed or recorded data. Of the four dispersion curves shown in FIG. 2 only one is observed (or, in the language of the present application, derived "from the wavefield"). The other three dispersion curves as showing in FIG 2 are a trial model curve and two iterations of the trial model curve towards a closer fit with the observed curves.

The present invention uses "a first and second dispersion curves" that are derived from the recorded wavefield. Both curves are derived from the observed signals. The curves represent different guided wave modes. The latter limitation has now been made part of the independent claims to clarify the scope of the present invention.

Bahjat does not disclose or suggest using a first and a second dispersion curve that are observed from the wavefield. Bahjat does not disclose or suggest using a first and a second dispersion curves corresponding to different guided wave modes. These limitations are also not found in Wooh (US 6,360,609).

In light of the above amendments and remarks, applicants believe that the present application and the amended claims are in proper condition for allowance. Such allowance is earnestly requested. If the Examiner is contemplating any action other than allowance of all pending claims, the Examiner is urged to contact Applicant's representative, Jody Lynn DeStefanis, at (203) 431-5505.

Applicants do not believe that any fee is due in connection with this response. In the event a fee is due, the Commissioner is hereby authorized to charge any deficiency (or credit any overpayment) to Deposit Account **N°. 19-0615**.

Respectfully submitted,

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